particular topic but at the same time it makes the book seem more like a proceedings than a genuine book, and although I will be in a minority I might have favoured all the references at the end. There are 14 pages of a good index which is highly desirable in such a publication and the book is well printed although the few photographs lack clarity.

The editors argue that the book is intended for researchers, lecturers, students and farmers but I suspect the last two groups may find the book heavy going. Moreover, the way farming incomes are declining, farmers could find the price as prohibitive as will most students. Although it does not claim such comprehensiveness, Simm's *The Genetic Improvement of Cattle and Sheep* (1998) will not find its sales affected by this book and Simm has certainly not been deterred from co-authoring the chapter (with Kinghorn) on 'Genetic Improvement of Beef Cattle'. This new book should become the standard text on cattle genetics — I do not know of any rival for that role. It will have pride of place in most libraries but if it is to do so for a long time it will need to be revised and updated every 5–10 years, and that may be a greater task than the original writing.

MALCOLM B. WILLIS
Department of Agriculture
The University of Newcastle-upon-Tyne
Newcastle-upon-Tyne NE1 7RU
U.K.

Genetic Methods for Diverse Prokaryotes (Methods in Microbiology, 29). Margaret C. M. Smith and R. Elizabeth Sockett (eds). Academic Press, San Diego. 1999. Pp. 500. Price \$59.95, comb-bound paperback. ISBN 0 12 652340 1.

Recent advances in genetic approaches and technology have made a variety of previously intractable bacteria amenable to genetic analysis and manipulation. In this book the editors have compiled contributions from world authorities covering both classical and new genetic methodologies which are applicable to a number of phylogenetically diverse bacteria, including the archaea.

The book is divided into three sections, the first of which comprises four chapters dealing with essential techniques. These chapters cover transformation procedures, together with detailed treatises on cloning vectors and bacteriophages suitable for delivery of genetic information into and between bacteria. Transposons have become extremely important in genome mapping, mutagenesis and as gene shuttles and an excellent review of their uses in a variety of organisms is presented.

The second section of the book presents six case studies devoted to diverse types of bacteria. An excellent chapter on the genetics of *Neisseria* introduces the section. This chapter is very well conceived and has a good mix of historical information combined with actual protocols. Phase variation is covered well and functional genomics gives the chapter a contemporary feel. The following chapter on *Clostridia* continues the trend with the theme concentrating on methods of transposon mutagenesis. Unfortunately, the remaining

chapters, covering *Borrelia*, *Bacteroides*, mycobacteria and Archaea do not maintain the inclusion of protocols and revert to taking an historical perspective. This notwithstanding, each of the chapters provides an excellent source of references for the reader wishing to delve deeper into the details of techniques. The final chapter in the case study section encompasses our current state of knowledge of archaeal genetics, and is extremely informative.

Four chapters dealing with the genetics of specific complex phenomena are contained in the final section of the book. Included in this is a large and detailed chapter covering everything you ever wanted to know about *Erwinia* phytopathogenesis but were too afraid to ask. Also included are chapters on the genetics of specific aspects of *Helicobacter*, *Rhodobacter* and *Bacillus* biology. Intriguingly, the basic content of these chapters is the same as that of the chapters in Section II and I failed to understand why the editors needed to include them under a separate section.

Clearly, such a book will have a certain degree of repetition in the description of techniques for different organisms. However, the editors have done a commendable job in keeping overlap to a minimum. Upon receiving the book and looking at its title, I had anticipated chapters filled with relatively detailed protocols. As mentioned above this was only evident for two chapters. Nevertheless, having read the book I found that this deficit is amply compensated by the fact that, almost without exception, each chapter provides a comprehensive account and up-to-date reference list. Indeed, in their preface to the volume, the editors comment that their '... aim is to educate on the technical feasibility of genetic experiments in many diverse prokaryotes ...' and they achieve this admirably. It is inevitable when covering such a range of techniques and diverse organisms that some omissions will occur. I felt that the genetic techniques used to study invasive bacteria such as *Listeria* or *Yersinia* would have been very useful. Perhaps also a chapter on *Caulobacter*. Despite these omissions, I feel the book presents a balanced overview of current genetic techniques and it is an extremely good source of information. This book provides excellent value for money and will prove an invaluable mine of information for Ph.D. students, postdocs and research scientists alike.

GARY SAWERS
Department of Molecular Microbiology
John Innes Centre
Norwich Research Park
Colney
Norwich NR4 7UH
U.K.

Agricultural Value of Plant Genetic Resources. R. E. Evenson, D. Gollin and V. Santaniello (eds). CAB International, Wallingford. 1998. Pp. 285. Price £40.00, hardback. ISBN 0 85199 295 1.

The notes on the back cover of the book provide a convenient summary of its origins and purpose: 'This book is an edited